

Notice of Allowability

Application No.

10/511,913

Examiner

Ives Wu

Applicant(s)

BUSCH ET AL.

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/28/2005.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 10/20/2004
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney Ashley Pezzner on July 28, 2005.

The application has been amended as follows:

1. **(Currently amended) Process for the preparation of polypropylene having an increased content of β -crystalline polypropylene, characterized in that which comprises mixing nanoscale iron oxide and polypropylene to form a mixture ~~are mixed and melted~~ and melting the mixture at a temperature of at least 150°C and subsequently cooling ~~cooled~~ in such a way that the cooled polypropylene melt has an increased content of β -crystalline polypropylene.**

17. **(currently amended) Process for the production of a biaxially stretched flat film, characterized in that which comprises mixing nanoscale iron oxide and polypropylene are mixed and melted to form a mixture and melting the mixture in an extruder at a temperature of at least 150°C to form a melt, and extruding the melt ~~is extruded~~ through a flat-film die, and cooling the melt is**

~~cooled~~ to give a pre-film in such a way that a content of at least 50% (measured by DSC) of β -crystalline polypropylene is formed, and warming the pre-film ~~is then warmed and stretched~~ and stretching the pre-film in the longitudinal direction and ~~cooled~~ cooling, subsequently ~~re-warmed and stretched~~ re-warming and stretching in the transverse direction, and where the temperature during longitudinal stretching is selected in such a way that the β -crystalline polypropylene of the pre-film is converted into the alpha modification of polypropylene.

20. (currently amended) Process according to ~~Claim 12~~Claim 13, wherein the surface coating consists of ~~oleic acid or stearic acid, silanes, amines or~~ sulphonates acid, stearic acid, silane, amine or sulphonate.

Allowable Subject Matter

- (1). Claims 1-20 allowed.
- (2). The following is an examiner's statement of reasons for allowance:

The closest prior art of record located or identified by the Examiner is Beghelli et al (US003681280). Beghelli et al teach a Method of preparing pigmented polyolefins. Involves admixing molten polyolefin (crystalline polypropylene essentially consisting of isotactic macromolecules, a crystalline propylene/ethylene copolymer having more than 50 wt% of propylene monomer, Col. 2, line 29-35) with a liquid dispersion of pigment

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(Ferric Oxide - Color Index pigment red 101) to finely disperse pigment (particle size less than 1 micron – Example 2, Col. 3) in the polyolefin, thereafter removing the liquid from the molten mass, and then extruding, Abstract

The same materials of applicant's is disclosed by Beghelli et al: extremely fine Ferric Oxide which size is less than 1 micron; crystalline polypropylene with isotactic macromolecules or crystalline copolymer of ethylene/propylene with more than 50 wt% of propylene monomer, moreover, process of dispersing the ferric oxide particle in the molten crystalline. However, Beghelli et al does not disclose the subsequently cooling effect on the growth of β -crystallinity in the isotactic polypropylene homopolymer or copolymer after mixing with iron oxide powder in polymer molten state. Beghelli et al does not further limit the size of extremely fine ferric oxide powder to be in nanomaterial scale which is 1-100 nanometer.

Second prior art of record located or identified by Examiner is Ikeda et al (US006235823B1). Ikeda et al disclose a crystalline polypropylene resin composition comprising a crystalline polypropylene resin and a β -nucleating agent, and a method of increasing the proportion of the β -form crystals in the crystalline polypropylene resin, the β -nucleating agent being a diamide compound, Abstract; Ikeda et al indicate the amount of β -nucleating agent is between 0.0001 to 1 parts by weight, Ikeda et al also notice the cooling condition will affect the ratio of α and β forms in the final product, Col. 12, line 44-57; However, the Ikeda et al do not disclose the use of inorganic β -nucleating agent – nanocrystal Ferric Oxide in the invention.

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Third prior art of record located or identified by Examiner is Hayashida et al (US006005034A), Hayashida et al disclose the α -crystal and β -crystal nucleators available for the ordinary skills in the art, including organic and inorganic compounds. However, Hayashida et al do not include the nanocrystal iron oxide as β -crystal nucleator in their invention.

Fourth prior art of record located or identified by Examiner is Harada et al (JP-62283822A), Harada et al disclose the manufacturing method for superfine powder of hydrous β -Ferric Oxide which size is less than 0.1 μm used in pigment, coating, catalyst and nanotechnology. However, Harada et al do not disclose this superfine powder of hydrous β -Ferric Oxide to be a β -nucleating agent.

(3). As of the date of this Notice of Allowability, the Examiner has not located or identified any reference that can be used singularly or in combination with another reference including the prior art cited above to render the present invention anticipated or obvious to one of ordinary skill in the art.

(4). Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ives Wu whose telephone number is 571-272-4245.

The examiner can normally be reached on 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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FRED TESKIN
PRIMARY EXAMINER
1713

Date: July 29, 2005